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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,200	11/12/2003	Thomas Hamelin	071469-0306773	2937
909	7590	07/02/2004	EXAMINER	
PILLSBURY WINTHROP, LLP			ANYA, IGWE U	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2825	

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,200

Applicant(s)

HAMELIN ET AL.

Examiner

Igwe U. Anya

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-- Th MAILING DATE of this communication app ars on th cover sheet with th correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 14-18, 20-23, 26, 30, 32, 34 and 35 is/are rejected.
- 7) ☒ Claim(s) 10, 13, 19, 24, 25, 27-29, 31, 33 and 36-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/12/03, 3/3/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6 – 9, 11, 12, 14 - 18, 20 – 22, 23, 30, 32, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugata et al. (US Patent 4898798).

3. Sugata et al. teach a processing system (fig. 4) for chemically treating a substrate comprising:

a temperature controlled (407) chemical treatment chamber (400);

a temperature controlled (406) substrate holder (404) mounted within the chemical treatment chamber and configured to be substantially thermally isolated from the chemical treatment chamber;

a vacuum pumping system (402) coupled to the chemical treatment chamber;

a gas distribution system (409) coupled to the chemical treatment chamber and configured to introduce one or more process gases (411 – 415) to the chemical treatment chamber in order to chemically alter exposed surface layers on the substrate, wherein the gas distribution system comprises a temperature controlled portion (416) exposed to the one or more process gases in the chemical treatment chamber;

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wherein the temperature controlled substrate holder comprises at least one of an electrostatic clamping system, a back-side gas supply system, and one or more temperature control elements (col. 20 lines 49 – 53), and the one or more temperature control elements comprise at least one of a cooling channel, a heating channel, a resistive heating element, a radiant lamp, and a thermo-electric device (col. 19 lines 23 – 26);

wherein the temperature controlled chemical treatment chamber comprises at least one of a cooling channel, a heating channel, a resistive heating element, a radiant lamp, and a thermo-electric device. (col. 19 lines 26 – 28);

wherein the gas distribution system comprises at least one gas distribution plenum (fig. 4);

wherein the one or more process gases comprise a first gas and a second gas different from the first gas (col. 20 lines 65 – 68);

wherein the chemical processing parameters comprise a chemical treatment processing pressure (col. 20 lines 1 – 8);

wherein the chemical treatment processing pressure ranges from about 1 to about 100 mTorr (col. 25 lines 43 – 55), and the gas includes ammonia having a partial mixture with another gas (col. 22 lines 53 – 61).

4. The limitations of claims 11, 12, and 14 – 17 are not considered. Recitation with respect to the manner in which an apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugata et al. (US Patent 4898798) in view of Kondo et al. (US Patent 5303671).

8. The Sugata et al. reference teaches the features previously outlined, but lacks a chemical treatment system coupled to another processing system, comprising at least one of a thermal treatment system and a substrate rinsing system, and transfer system.

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9. However, Kondo et al. teach the chemical treatment system (400) coupled to another processing system (col. 4 lines 40 – 46), comprising at least one of a thermal treatment system (80) and a substrate rinsing system (90), and transfer system (53).

10. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kondo et al. into the Sugata et al. reference to avoid exposing the wafer to the atmosphere contamination.

11. Claims 10, 13, 19, 24, 25, 27, 28, 29, 31, 33, 36, and 37 are objected to as being dependent upon a rejected claim but would be allowable if rewritten in independent form.

12. Prior art considered, but not used in the rejection include Kamiyama (US Patent 5254505).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igwe U. Anya whose telephone number is (571) 272-1887. The examiner can normally be reached on M - F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Igwe U. Anya
Examiner
Art Unit 2825

IA

June 23, 2004



MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
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